

## Reply

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**W**e thank Robeson and Ensor (2006; hereafter RE06) for their comments about gridded precipitation averages. We fully agree with their assessment that spatial averaging removes important statistical information. It is valuable to discuss such problems and their solutions with the scientific community.

When developing a dataset for public distribution, we try to decide which statistics are most useful to the community. In the case of daily precipitation grids for South America, we selected spatially averaged precipitation as the primary statistic and the number of included stations as a companion statistic. We claim that this particular selection is of widespread value to the community, and also, more generally, that gridded spatial averages of scattered observations of nature are widely regarded as standard products.

The scientific community, however, is not homogeneous; different user communities have different needs. We agree with RE06's basic premise that certain studies require information other than simple spatial averages. Such needs may be fulfilled either by using original station data, or with companion statistical products (e.g., the number of stations with actual rain, variance, etc.).

RE06 propose two specialized approaches to produce gridded precipitation products. Both of these methods preserve certain statistical information (frequency distribution) at the expense of other statistical characteristics (historical mean).

In summary, it is our opinion that spatial precipitation averages are the most useful product for the general community. Other statistics could also be included in publication, to the extent of expressed need. Alternative gridded products are also of value for some applications, and we welcome their publication. However, they should not replace the more straight forward spatial averages.

## REFERENCES

- Robeson, S. M., and L. A. Ensor, 2006: Comments on "Daily precipitation grids for South America." *Bull. Amer. Meteor. Soc.*, **87**, 1095–1096.

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